

What is claimed is:

1. A secondary battery comprising:

time measuring means for measuring charging time or discharging time of the secondary battery;

5 memory means for storing time information obtained by accumulating the time measured by said time measuring means;

display means including a plurality of luminous bodies for displaying a predetermined information by lighting said luminous bodies; and

judging means for making judgment if the time represented by said time
10 information as stored in said memory means exceeds a predetermined time whenever being instructed to display the predetermined information by said display means; wherein:

said display means displays all display patterns of information relating to the residual capacity of the secondary battery as the predetermined information regardless
15 of the residual capacity if said judging means determines that the time of said time information does not exceeds the predetermined time.

2. The secondary battery according to claim 1, wherein:

said memory means stores the accumulated charging time when the secondary battery is charged and the accumulated discharging time when the secondary battery is
20 discharged as the time information; and

said judging means judges if at least one of the time information represented by the charging time and the discharging time exceeds the predetermined time.

3. The secondary battery according to claim 1, wherein:

the display of said all display patterns of the information relating to the residual
25 capacity by said display means is display of incrementing or decrementing the number of lighted luminous bodies among said plurality of luminous bodies one by one.

4. A display method of carrying out a display by a secondary battery, comprising:

a time measuring step for measuring the charging time or the discharging time
30 of the secondary battery;

a storage control step for controlling the storage of time information obtained by accumulating the time measured in said time measuring step;

a control step for controlling display means comprising a plurality of luminous bodies for carrying out the display of a predetermined information by lighting the luminous bodies; and

5 a judging step for judging if the time represented by the time information controlled as storage through the processing in said storage control step exceeds a predetermined time whenever instructed to display the predetermined information in said control step; wherein:

10 all display patterns of information relating to the residual capacity of the secondary battery are displayed regardless of the residual capacity if it is determined that the time represented by the time information does not exceeds the predetermined time in said judging step.

5. A recording medium on which a computer readable program relating to a display performed by a secondary battery is recorded, wherein said program comprising:

15 a time measuring step for measuring the charging time or the discharging time of the secondary battery;

a storage control step for controlling the storage of time information accumulating the time measured in said time measuring step;

20 a control step for controlling display means comprising a plurality of luminous bodies for displaying designated information by lighting the luminous bodies; and

a judging step for judging if the time represented by the time information controlled as storage in said storage control step exceeds a predetermined time whenever being instructed to display the predetermined information in said control step; wherein:

25 all display patterns of information relating to the residual capacity of the secondary battery are displayed regardless of the residual capacity if it is determined that the time represented by the time information does not exceed the predetermined time in said judging step.

30 6. A program executed by a computer for controlling the processing of a display performed by a secondary battery, said program comprising:

a time measuring step for measuring the charging time or the discharging time of the secondary battery;

a storage controlling step for controlling the storage of time information accumulating the time measured in said time measuring step;

a control step for controlling display means comprising a plurality of luminous bodies for displaying a predetermined information by lighting the luminous bodies; and

5 a judging step for reading out the time information controlled as storage in the processing in said storage control step and for judging if the time represented by the time information does not exceed a predetermined time whenever being instructed to display the predetermined information in said control step; wherein

10 all display patterns of information relating to the residual capacity of the secondary battery are displayed regardless of the residual capacity if it is determined that the time represented by the time information does not exceed the predetermined time in said judging step.

7. A secondary battery including:

15 detection means for detecting the magnitude of the current flowing inside the secondary battery;

display means comprising a plurality of luminous bodies;

calculation means for calculating the timing to light the plurality of luminous bodies in response to the current magnitude detected by said detection means; and

20 control means for controlling said display means based on the timing calculated by said calculation means.

8. The secondary battery according to claim 7, wherein:

said control means sequentially lights one of said plurality of luminous bodies defining said display means; and

said calculation means calculates the timing of lighting said luminous bodies.

25 9. The secondary battery according to claim 7, wherein:

said control means controls said display means whenever being instructed to display by said display means in case of detection of the current by said detection means in the discharging mode; and

30 said control means controls said display means regardless of the instruction to display by said display means in case of detection of the current by said detection means in the charging mode.

10. A display method for displaying in a secondary battery, comprising:

a detection step for detecting the magnitude of the current flowing inside the secondary battery;

a display control step for controlling the display of display means comprising a plurality of luminous bodies; and

5 a calculation step for calculating the timing of lighting said plurality of luminous bodies in response to the current magnitude detected in the processing in said detection step; wherein:

said display control step controls the display of said display means based on the timing calculated in the processing in said calculation step.

10 11. A recording medium on which a computer readable program relating to a display preformed by a secondary battery is recorded, said program comprising:

a detection step for detecting the magnitude of the current flowing inside the secondary battery;

15 a display control step for controlling the display of display means comprising a plurality of luminous bodies; and

a calculation step for calculating the timing of lighting the plurality of luminous bodies in response to the current magnitude in case when such current is detected in the processing in said detection step; wherein

20 said display control step controls the display of said display means based on the timing calculated in the processing in said calculation step.

12. A program for making a computer to execute procedure for controlling a display performed by a secondary battery, said program comprising:

a detection step for detecting the magnitude of the current flowing inside the secondary battery;

25 a display control step for controlling the display of display means comprising a plurality of luminous bodies; and

a calculation step for calculating the timing of lighting the plurality of luminous bodies in response to the current magnitude in case when such current is detected in the processing in said detection step; wherein:

30 said display control step control the display of said display means based on the timing calculated in the processing in said calculation step.